ecology and environment, inc.

101 YESLER WAY, SEATTLE, WASHINGTON, 98104, TEL. 206/624-9537

International Specialists in the Environment

HW739

MEMORANDUM

DATE: April 10, 1987

TO: John Osborn, FIT-RPO, USEPA, Region X

THRU: David Buecker, FIT-OM, E&E, Seattle

FROM: Jeffrey Whidden, FIT-PM, E&E, Seattle

SUBJ: Trip Report
Monsanto Chemical Company
Soda Springs, Idaho

REF: TDD F10-8702-06

CC: Deborah Flood, HWD-SM, EPA
Thomas Tobin, E&E, Seattle

1. Purpose of the Site Inspection:

Under Technical Directive Document (TDD) F10-8702-06, Ecology & Environment, Inc. (E&E) conducted a file review and an on-site inspection of the Monsanto Chemical Company to obtain additional information regarding wastes disposed of at the facility, local environmental conditions, and water usage in the area.

2. Persons Conducting the Site Inspection:

Jeffrey Whidden, E&E, Seattle (206) 624-9537
George Brooks, E&E, Seattle (206) 624-9537

3. Date of Inspection:

March 23, 1987 0800 - 1200 hours

4. Persons Contacted for the Site Inspection:

Timothy Oliver, Sr. Environmental Engineer, Monsanto Chemical Company (left Monsanto in early April 1987)
Robert Geddes, Environmental Engineer, Monsanto Chemical Company (208) 547-3391

5. Information Obtained During the Site Inspection:

- The Monsanto Chemical Company Soda Springs plant is a large (530 acres) elemental phosphorus production facility that has been in operation since 1952.

- Primary wastes generated at the plant are slag, which is poured in a molten state onto a pile, and process water, some of which is reused. Details of ponds, their contents, and constituents of other waste streams, are anticipated in a forthcoming data package from Monsanto.

- Waste oil and solvents were spread on roads at the plant until 1978. They are currently recycled.

- There are five old landfills at the site. One landfill is known to contain 32 tons of vanadium pentoxide, which was buried in plastic-lined drums. Asbestos wastes have also been disposed of on site. For the last five years, the asbestos has been double bagged and buried in a posted area. Waste quantity information is expected in the forthcoming data package.

- Current waste handling practices at the facility appear to be well organized and pose little threat of an environmental release.

- Ground water flows generally to the southwest in the vicinity of Monsanto. Soda Springs obtains its municipal water from Formation Springs (ground water according to the HRS definition), and Ledge Creek Springs (surface water according to the HRS definition). Both of these locations are within two miles of Monsanto, but are upgradient of the plant in relation to the water table contours established by the U.S.G.S.

- Monsanto has an extensive ground water monitoring program, which includes more than 40 wells around the plant installed by Golder Associates. Golder Associates has prepared a geohydrological report for the company using information obtained from boring logs and subsequent well sampling. It is anticipated that this report will be made available for review by E&E.

- Substantial information about the facility that was requested during the site investigation visit is still being gathered by Monsanto. During a phone conversation on April 6, 1987, Bob Geddes, environmental engineer for Monsanto, stated that it should be mailed to E&E by about April 15, 1987.

6. Special Considerations:

Key geohydrological information and ground water sampling results (Golder Report) have yet to be received from Monsanto. The tentative recommendations that follow are subject to change following the review of this data.

7. Conclusions and Recommendations:

- Monsanto generates large quantities of slag and process water wastes, which may have contaminated local ground water with heavy metals and phosphorus. In addition, several old landfills at the plant contain potentially hazardous substances, such as vanadium pentoxide and asbestos.

- Monsanto has an extensive ground water monitoring program in place, but the wells have never been sampled for the full range of parameters on EPA's HSL. It is therefore recommended that select wells be identified and sampled for HSL compounds and elements. Identification of the specific wells to be sampled must await receipt of the Golder Associates report.

JV/ng